<u>**Amendments to the Specification:**</u>

Please replace the paragraph starting with "Referring now to the drawings" beginning on page 6, lines 15-32 and ending on page 7, lines 1-7 with the following amended paragraph:

Referring now to the drawings, wherein like reference numerals designate corresponding structures throughout the views, and referring in particular to FIGURE 1, a block diagram illustrates one preferred embodiment of the digital photocopier according to the current invention. A scanner unit 1 of the digital photocopier projects light onto a document surface and optically reads characters and images by focusing the reflected light from the document surface onto a CCD via a group of mirrors and lenses. A sensor board unit 2 converts the front and back image signal from the CCD to digital signals and outputs the digital signals to an image data control unit 3. The image data control unit 3 controls the data transfer among an image process unit 4, a parallel bus 5 and an image memory access control unit 6. The image data control unit 3 also controls the entire system controls such as communication between a system control unit 7 and a process control unit 8. The process control unit 8 controls various processes that act on the image data. In general, the image data inputted into the image data control unit 3 is transferred to the image process unit 4, and the image process unit 4 corrects the signal degradation associated with the digitization and the optics. The image process unit 4 outputs back to the corrected image data to the image data control unit 3. In response, the image data control unit 3 transfers the corrected image data to the image memory access control unit 6 via the parallel bus 5. The image memory access control unit 6 controls the transferred corrected image data and the memory access of a memory unit 9 under the control of the system control unit 7. In addition, the image data control unit 3 processes the data from an external personal computer 10 for printing as well as compresses or decompresses the image data for the efficient storage in the memory unit 9. The image memory access control unit 6 reads the front and back compressed image data from the memory unit 9

for printing and ~~decompressed~~ decompresses the image data back to the original image

data which is transferred to the image data control unit 3 via the parallel bus 5.

Please replace the paragraph starting with "Still referring to" beginning on page 7, lines
9-16 with the following amended paragraph:

     Still referring to FIGURE 1, upon receiving the front and back image data from

the image memory access control unit 6, the image data control unit 3 outputs the above

image data as output image data to the image process unit 4. The image process unit 4

corrects see-through image by ~~simultaneously~~ referring to the front image and the back

image and outputs the corrected image data to a video data control unit 11. In turn, the

video control unit 11 performs a predetermined pulse control on the output image data

and transfers the processed image data to an image formation unit or a printer engine 12

for forming a reproduced image on an image-carrying medium.

Please replace the paragraph starting with "Under the circumstances" beginning on page
8, lines 1-11 with the following amended paragraph:

     Under the circumstances where the above described multiple output jobs such as

copying, faxing and printing or associated processes are taking place in parallel, the

system control unit 7 along with ROM 15 and RAM 16 controls the entire system by

allocating the resources. Similarly, the process control unit 8 along with ROM ~~15~~ 17 and

RAM ~~16~~ 18 controls the flow of the image data. An operation panel 19 inputs a selection

from the above described various jobs. The system control unit 7 and the process control

unit 8 communicate with each other via the parallel bus 5, a serial bus 20 and the image

data control unit 3. The image data control unit 3 converts the data format for

interfacing between the parallel bus 5 and a serial bus 20. A bus control unit of a bus

mediation unit 21 mediates the right to use the parallel bus 5 in case of simultaneous

multiple bus requests.

Please replace the paragraph starting with "Now referring" beginning on page 8, lines 18-32 and ending on page 9, lines 1-5 with the following amended paragraph:

Now referring to FIGURE 2, a block diagram illustrates one preferred embodiment of the image data control unit 3 according to the current invention. The image data control unit 3 further includes an image data input/output (I/O) control unit 30, a command control unit 31, an image data input control unit 32, an image data output control unit 33, a data compression unit 34, a data decompression unit 35, a data conversion unit 36, a serial data interface (I/F) unit 38, 39 and a parallel data interface (I/F) unit 3937. The scanned image data from the sensor board unit 2 is inputted to the image data I/O control unit 30 and is further outputted from the image data I/O control unit 30 to the image process unit 4. The image process unit 4 corrects the image data and outputs the corrected image data to the data compression unit 34 via the image data input control unit 32. In order to increase the transfer rate in the parallel bus 5, the data compression unit 34 compresses the image data, and the data conversion unit 36 outputs the converted image data to the parallel bus via the parallel data I/F unit 3937. In the other direction, the compressed data is sent to the data decompression unit 35 via the parallel data I/F unit 39-37 and the data conversion unit 36. After the image data is decompressed in the data decompression unit 35, the image data output control unit 33 outputs the decompressed image data to the image process unit 4. The data conversion unit 36 interchangeably converts both the serial data and the parallel data for communication between the system control unit 7 and the process control unit 8. The two tier serial data I/F units 38 and 39 control communication between the image process unit 4 and the serial bus 20.

Please replace the paragraph starting with "Now referring" beginning on page 10, lines 7-15 with the following amended paragraph:

Now referring to FIGURE 4, a block diagram illustrates another preferred embodiment of the image process unit 4 according to the current invention. The image

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process unit 4b further includes a plurality of input/output (I/O) ports 51 for inputting and
outputting data to and from the external devices; bus switches/local memory units 52; a
memory control unit 53 for controlling memory areas and data paths that the bus
switches/local memory units 52 utilize; a processor array 54 for processing the image
data stored in the switches/local memory units 52 and for storing the processed image
data back in the switches/local memory units 52; a program RAM 55 for storing
parameters used for processing by the processor array 45; a data RAM 56 and a host
buffer unit 57.

Please replace the paragraph starting with "Referring to" beginning on page 12, lines 9-
17 with the following amended paragraph:

Referring to FIGURES 7, a graph illustrates one exemplary image data to be
sent to the see-through back image correction unit 44. FIGURE 7A is a graph illustrating
exemplary front image data 81 while FIGURES 7B1, 7B2 and 7B3 are graphs
respectively illustrating back image data 82a, 82b and 82c. The front image data 81
includes the image data representing an image printed on the front side as well as a see-
through back image that is seen on the front side through the semi-transparent document.
Similarly, the back image data includes the image data representing an image printed on
the back side as well as a see-through front image that is seen through the back side
through the semi-transparent document The back image data 82a, 82b and 82c
respectively represent a dot pattern image, a character portin image and a graphic portion
image. The X axis and the Y axis in these graphs respectively represent positions and
image data values. The higher the X value is, the darker the image appears.

Please replace the paragraph starting with "As described above" beginning on page 12,
lines 31-32 and ending on page 13, lines 1-12 with the following amended paragraph:

As described above, the edge amount detection unit 441 extracts edge portions
of the output image data. For example, even though an image on the back side of a

document is clear, edges of a see-though image is generally blurred as it is seen through the document. On the other hand, a low contrast print image such as a character portion and a dot pattern portion have sharp edges even if the average intensity level is low. Based upon the above distinction or characteristics of edges, an image is determined whether it is original or see-through. To detect the edges, for example, a filter L1 such as shown in FIGURE 9 is applied to the front image 81 of the output image data as shown in FIGURE 7A. Similarly, to detect the edges, the filter L1 is applied to the back side image data. As the result of the above described edge detection, FIGURE 10A is a graph illustrating the edges as represented by peaks 83. By this detection method, the see-through image is separated from the edge portions of a low contrast image. However, when the edges 83 are determined by the above method, since inner portions of characters are not determined as edges, the character inner portions may be mistaken as see-through back image portions.

Please replace the paragraph starting with "Still referring to" beginning on page 16, lines 31-32 and ending on page 17, lines 1-24 with the following amended paragraph:

Still referring to FIGURE 16, upon receiving the small average intensity signal, the edge amount detection unit 441 determines an edge amount of the output image data and sends it to the determination unit 447 in the step 3. The determination unit 447 determines in step 4 that the output image data represents an original front image when the detected edge amount is sufficiently high and generates a front image signal. The determination unit 447 then sends the output image data and the front image signal to the level correction unit 444. In step 8, the level correction unit 444 outputs the output image without performing the see-through back image removal process. On the other hand, when the detected edge amount is not sufficiently high in step 4, the determination unit 447 generates a non-front image signal and sends it to the pitch frequency detection unit 446. In step 5, in response to the non-front image signal, the pitch frequency detection unit 446 detects the pitch frequency of the output image data and sends it to the determination unit 447. Based upon the pitch frequency, the determination unit 447

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determines whether or not the output image indeed has the detected pitch frequency in step 6. When the determination unit 447 determines that the output image data has the detected pitch frequency and is a front dot pattern image as shown in FIGURE 17A, the determination unit 447 generates a front dot pattern image signal 85 and sends it to the level correction unit 444. In response to the front dot pattern image signal, in the step 8, the level correction unit 444 outputs the output image without performing the see-through back image removal process. On the other hand, when the determination unit 447 determines that the output image data fails to have the detected pitch frequency, the level correction unit 444 performs the see-through back image removal process in step 7 and sends the removed see-through back image to the image quality control unit 45 in step 9. Thus, in the above steps, it is determined whether or not an image has a pitch frequency, and the determination enables to separate low intensity dot pattern images with weak edges from see-through back images so as to form a front image 86 as shown in FIGURE 17B.